

## Garden Stake Support

### FIELD OF THE INVENTION

The present invention relates to garden stake support. The support of the invention is useful both in commercial and in domestic situations.

### 5 BACKGROUND OF THE INVENTION

The difficulties experienced by gardeners in securing garden stakes into position are well known. A garden stake may typically be of considerable height and could be expected to bear substantial loads. For this reason stakes are usually buried deep into the ground to stabilise the structure. However, it is no easy task to install the stake in the first place and no easy task to remove the stake once in position. Where none of the stake is below ground it is difficult to reach the top of the stake to enable it to be hammered into the ground and it may be necessary to use steps to reach to top of the stake. Depending on the position of the stake in a garden this is not always convenient and in any event the top of a ladder is not the most secure position from which to swing a mallet. Similarly, removing a stake from hard ground is difficult. Digging a stake out of the ground risks disturbing adjacent plants, which may be undesirable.

It is to this situation that the present invention is addressed.

### SUMMARY OF THE INVENTION

Therefore in one form of the invention though this need not be the only or indeed the broadest form there is proposed a garden stake support for use in ground including:

- a lowermost portion adapted to engage the ground;
- an offset portion connecting said lowermost portion to an uppermost portion that is axially offset from said lowermost portion;
- said offset portion including an open platform directly above said lowermost portion to serve as a hammer point when driving said lowermost portion into the ground.

By having a stake that has an axial offset it is possible to include a hammer point that can be used to drive the stake into the ground without the difficulties

associated with driving in the stake from a height. Further by locating the axial offset generally at ground level the stake has a pleasingly uniform appearance.

In preference the lowermost portion is, in use, located below the ground surface and the uppermost portion is located above the ground surface.

5 Preferably the lowermost portion consists of an I-shaped open three-sided channel member wherein a first side element extends further and is longer than a second side element and whereby at a lower end the lowermost portion forms a point.

Preferably a bottom edge extends slopingly between said first and second side elements and wherein said bottom edge includes an indented shoulder portion.

10 Preferably the offset portion extends generally at right angles to the lowermost portion and includes a pair of spaced upper and lower parallel frame members.

Preferably the lower frame member includes on an outer side thereof a curled tongue extension able to receive a water supply pipe.

15 Preferably a branch pipe member is able to extend from the supply pipe and pass in the space between the upper and lower frame members towards the uppermost portion.

20 Preferably the uppermost stake portion consists of an open ended base section into which is fitted an interlocking upright section and wherein the base section extends upwardly from the frame members said base section having a footprint that allows the upper frame member to form a narrow first ledge around the perimeter of the base section, said base section including adjacent an upper edge thereof but spaced therefrom an upper surrounding collar extending partially around the base section in line with the first ledge formed by the upper frame member.

25 Preferably said lower frame member forms a narrow second ledge adjacent and around the bottom of the base section.

30 Preferably a notch is cut into each of the first ledge and collar on opposing sides of the base member whereby the notches are axially aligned on either side of the stake base member the arrangement of the frame members and notches in the first ledge and collar combining to form a means for securing and directing a water supply from the branch pipe to an elevated position.

Preferably the interlocking upright section is a snug fit in the open ended base section, said interlocking section consisting of an extrusion that in cross section takes the form of a back to back C-shaped element.

Preferably said interlocking section is formed of two said interlocked back to back C-shaped elements forming a stable structure said second back to back C-shaped element being partially located within one side of the back to back C-shaped element and further partially received in slots cut into an upper edge of the base member.

Preferably the stake further includes a removal wedge located below the offset portion said removal wedge consisting of an asymmetric notch cut into a bracket extending downwardly from the offset portion, wherein the wedge may be used to lever an embedded stake.

Preferably a second stake is used as a levering tool and a pointed end of the lowermost portion lodges in the wedge an indent on a sloping edge of the point helps the removing stake to engage the embedded stake and thus facilitates the removal process.

#### DESCRIPTION OF DRAWINGS

The above and other objects, features, and advantages of the present invention will be apparent from the following detailed description of a preferred embodiment in conjunction with the accompanying drawings. In the drawings:

Figure 1 illustrates a first perspective view of a garden stake support in accordance with the present invention;

Figure 2 illustrates a second perspective view of a garden stake support in accordance with the present invention;

Figure 3 illustrates a third perspective view of a garden stake support in accordance with the present invention;

Figure 4 illustrates a detail of the stake during a removal process;

Figure 5a and 5b show in detail an offset portion of the stake;

Figure 6 shows a plan view of the stake; and

Figure 7a and 7b illustrate interconnecting elements used to form the uppermost portion of the stake.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Shown in the drawings is a garden stake 10 constructed in accordance with the

5 invention. The garden stake of the invention serves the same purpose as existing stakes however in constructional details the stake 10 is very different from conventional devices.

The stake 10 comprises a lowermost portion 12 and an uppermost portion 14. The

lowermost and uppermost portions 12,14 are interconnected at an offset portion 16.

10 As can be seen in figures 1-3 the lowermost portion 12 consists of an open three sides channel member having a first side element 18, a second side element 20 and a rear element 22. The first side element 18 extends further and is longer than the second side element 20. Thus at a lower end the lowermost portion 12 forms a point 24 where the first side element 20 and rear side 22 meet. The outer edge 26 of the rear 22 slopes 15 from sides 20 to 22. However, as can be seen from the drawings the slope on the edge 26 is not straight and includes a slight indented shoulder 27.

The lowermost portion 12 terminates at its upper end in the offset portion 16. The offset

portion 16 is seen to advantage in side view in figures 5a and 5b. The offset portion 16 extends generally at right angles to the lowermost portion 12 and includes a pair of

20 spaced upper and lower parallel frame members 28 and 30 respectively. In use the frame members 28, 30 could be expected to rest generally horizontally at approximately ground level. The lowermost stake portion 12 depends downwardly from one end of the offset portion 16 and the uppermost stake portion 14 extends generally upwardly from an opposing end of the offset portion.

25 Thus the offset portion 16 directly above the lowermost stake portion 12 forms an open platform area serving as a hammer point 32. The end of the upper frame member 28 is rounded at the hammer point 32 that thus forms a target. Striking the hammer point 32 with an impact force will drive the lowermost stake portion 12 into the ground.

The lower frame member 30 includes on an outer side thereof a curled tongue extension 34. The extension 34 is open at an upper end and is thus able to receive a water supply pipe 36 or 38 as shown in figures 5a and 5b. The extension 34 is sized so as to comfortably accommodate and hold differing sizes of water supply pipe diameter.

5 With oversize pipe 38 a moderate deformation of the pipe ensures a close fit in the extension 34. A branch pipe member 40 is thus able to extend from the supply pipe 36,38 and pass in the space between the upper and lower frame members 28, 30 towards the uppermost stake portion 14. Where required the branch pipe 40 may terminate in a distribution point just beyond the edge of the stake 10 as shown in dotted

10 lines in figure 1.

The uppermost stake portion 14 consists of a four sided open ended base section 42

into which is fitted an interlocking upright section 44. The base section 42 extends upwardly from the upper frame member 28. Moreover, as shown the base section 42 has a footprint that allows the frame member 28 to form a narrow ledge around the

15 perimeter of the base member 42. A bracket 46 extending between the base member and a free part of the upper frame member 28 serves as a buttress and supports the base member 42.

Adjacent an upper edge of the base member 43 but spaced therefrom is an upper surrounding collar 48 that extends around three outer sides of the base member 42 in

20 line with the ledge formed by the frame member 28. A notch 50 is cut into each of the ledge and collar 48 on opposing sides of the base member 42. As can be seen from the drawings the notches 50 are axially aligned on either side of the stake 10. The branch pipe 40 is turned through 90 degrees close received in the notches 50. The arrangement of the frame members 28,30 and notches 50 in the ledge and collar 48

25 combine to form a means for securing and directing a water supply to an elevated position. The branch pipe 40 is held against the stake 10 and thus secured against any unwanted movement and, to some extent at least protected from damage.

The an interlocking upright section 44 is a snug fit in the open ended base section 42 and is illustrated in grater detail in figures 7a and 7b. The upright section 44 serves a

30 number of purposes. Firstly, as can be seen in figure 1 the upright can house risers 54 from the water supply pipe 40 to thereby enable water to be delivered from a stable elevated position. Secondly, the upright also forms the traditional garden stake to which plants may be secured. The upright section 44 is the most visible part of the stake 10. As the most prominent visual part of the stake 10 it is generally desirable for the upright

to have a reduced visual impact. That is to say the garden itself and the plants in the garden should not be dominated by the physical infrastructure used to support them. Notwithstanding the need to diminish the visual impact of the upright portion 44 of the stake 10 it is still important that this part of the whole is sufficiently strong to serve its purpose.

These potentially conflicting requirements are resolved in the present invention by use of interconnecting elements 56 that may be used singly or combination. The specific arrangement selected in any case will depend on an assessment of the needs of the situation. Each interconnecting section 56 consists of an extrusion that in cross 10 section takes the form of a back to back C-shaped element having thus a central wall 58 that is the back to back element and outer sides 60 that are closed and lead to open sides 62 bounded by edges 64. In a simple form of the invention inserting a single 15 interconnecting section 56 into the base member 42 as shown in figures 1 to 3 may embody the invention. The section 56 is a smooth fit in the base member 42 and is thus prevented from any unwanted movement by the base member 43. Advantageously, the 20 open ends 62 of the section 56 are able to receive the water pipe 40 therein.

The manner in which the elements 56 interconnect is shown in figures 7a and 7b. The central wall 58 effectively divides the inner space of the section 56 into two halves. Each half of the inner space in the element is bounded by the central wall 58 and a part 25 of the outer sides 60 and the open sides 64. The section 56 is rectangular rather than square and one end of a first section 56 comprised of a side-wall 60 and adjacent edges 64 of the open side 62 can be slotted into the open half space of a second element 56. The interlocking connection is a secure connection and as can be seen from the drawings the two elements 56 when interlocked are prevented from movement with respect to each other thereby forming a stable structure.

The stable structure formed from the two interlocking sections and as illustrated in figure 7a can be incorporated onto the base member to form a more substantial upright where circumstances demand. A first section 56 is located in the base member 42 as described. A second interlocking section 56 is positioned in the first section 56 so as to 30 form the structure shown in figure 7a. Upwardly of the collar 48 the second element is received in slots 52 cut into an upper edge of the base member 42. The slots 52 are arranged on either side of the base member 42 in line with the notches 50 and provide additional structural stability for the unit.

To install the stake 10 it is thus a simple matter of positioning the stake and hammering on the hammer point 32. The hammer point is closer to the ground surface than the top of a conventional stake and is easier to access. The operator is thus able to exert force more easily on the stake thereby making the installing process less traumatic. The point

5 24 on the lowermost stake portion 12 also assists installation of the stake 10.

Stakes embedded in hard ground can often be difficult to remove. The stake 10 of the present invention incorporates a device that is designed to facilitate the removal process.

Located below the lower frame member 30 of the offset portion 16 is a removal wedge

10 66. The wedge 66 consists of an asymmetric notch cut into a bracket 68 extending downwardly from the frame member 30. The pointed end 24 a second free stake 10 may be slotted into the wedge 66 and used to lever the embedded stake 10 out of the ground as shown in figure 4. The indent 27 on the sloping edge 26 of the point 24 helps the removing stake to engage the embedded stake and thus facilitates the removal process. It can also be seen from the drawing that the removal wedge 66 is relatively close to the ground surface. Accordingly, where a conventional stake has to be pulled out of the ground, which requires considerable force the stake of the present invention uses the mechanical advantage of a lever.

Further advantages and improvements may very well be made to the present invention

20 without deviating from its scope. Although the invention has been shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope and spirit of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatus.

In any claims that follow and in the summary of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprising" is used in the sense of "including", i.e. the features specified may be associated with further features in various embodiments of the invention.